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What Is Claimed Is:

1	1. A method to compensate for stress-induced deflection in a compound		
2	microprobe, the microprobe including a substrate, a microcantilever extending		
3	outwardly from the substrate, and a film formed on the microcantilever, said method		
4	comprising the steps of:		
5	determining an amount of stress-induced deflection of the		
6	microcantilever; and		
7	mounting the microprobe so as to compensate for the stress-induced		
8	deflection.		
1	2. The method of Claim 1, wherein said mounting step includes selecting a		
2	compensation piece based upon the amount of stress-induced deflection.		
1	3. The method of Claim 2, wherein the compensation piece is a wedge		

4. The method of Claim 2, wherein said step of selecting the compensation piece comprises correcting an angle between a longitudinal axis of the microcantilever and the substrate so as to insure that light reflected from the microcantilever during operation contacts a detector of a deflection detection apparatus.

generally aligning the microcantilever with a deflection detection apparatus.

- 5. The method of Claim 4, wherein said selecting step includes selecting a
 dimension of the compensation piece.
- 1 6. The method of Claim 5, wherein the compensation piece is a wedge and 2 the dimension is an angle between a microcantilever mounting surface of the wedge and 3 a base of the wedge.

1	7.	The method of Claim 6, wherein said mounting step includes attaching
2	substrate to th	e mounting surface.

- 1 8. The method of Claim 2, wherein said mounting step includes coupling a 2 bottom surface of the substrate to the compensation piece.
- 1 9. The method of Claim 2, wherein the stress-induced deflection is a static deflection caused by the film.
- 1 10. A microprobe assembly including a microcantilever and a substrate 2 coupled to a support, the microprobe assembly comprising:
- a compensation piece disposed intermediate the support and the substrate, said compensation piece configured to compensate for an amount of static deflection of the microcantilever.
- 1 11. The microprobe assembly of Claim 10, wherein said compensation piece 2 is a wedge-shaped structure having a mounting surface and a base.
- 1 12. The microprobe assembly Claim 11, wherein an angle between said 2 mounting surface and said base is selected based on the static deflection so as to align 3 the microcantilever to a deflection detection apparatus.
- 1 13. The microprobe assembly of Claim 10, wherein the compensation piece 2 is formed integrally with the support.
- 1 14. The microprobe assembly of Claim 10, wherein said compensation piece 2 is made of an insulating material.

1	15.	A method of compensating an amount of static deflection associated with	
2	at least one microprobe of a first planar array of microprobes, each microprobe of the		
3	array including	g a substrate, a microcantilever extending outwardly from the substrate,	
4	and a film formed on the microcantilever, the method comprising the steps of:		
5		directing a beam of light towards a first microprobe of the first array of	
6	microprobes;		
7		reflecting the beam off the microcantilever of the first microprobe;	
8		determining a first amount of static deflection based on the reflected	
9	beam; and		
10		selecting a first microprobe compensation piece based upon the first	
11	amount of defl	ection.	
1	16.	The method of Claim 15, further comprising the step of mounting the	
2	first microprob	be on the first selected microprobe compensation piece.	
1	17.	The method of Claim 15, fouther commission the stan of	
2		The method of Claim 15, further comprising the step of: mounting each of the microprobes of the first planar array of	
3		a compensation piece having the same shape as the first selected	
4		mpensation piece.	
•	inicroprooc coi	inpensation piece.	
1	18.	The method of Claim 15, further comprising the step of:	
2	. 1	repeating said directing, reflecting, determining and selecting steps for	
3	each of the microprobes of the first array of microprobes;		
4	;	and then mounting each of the microprobes on a corresponding	
5	compensation p	piece having a shape selected according to a corresponding amount of	
6	static deflection	n.	
1	19.	The method of Claim 15, wherein the first compensation piece is a	
2	wedge.		

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and



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1	20.	The method of Claim 19, wherein the wedge includes a base and a
2	mounting sur	face defining an angle.
1	21.	The method of Claim 20, wherein said selecting step includes computing
2	the angle bas	ed on said determining step.
1	22.	The method of Claim 16, further comprising the step of:
2		integrally forming the first array of microprobes from a single wafer
3	prior to the d	irecting step.
1	23.	The method of Claim 15 further comprising the step of:
2		mounting each of a second planar array of microprobes on a
3	corresponding	g compensation piece shaped according to the first selected microprobe
4	compensation	piece.
1	24.	The method of Claim 22 including the stand of
	24.	The method of Claim 23, including the steps of:
2		integrally forming the first array of microprobes from a first wafer; and
3		integrally forming the second array from a second wafer.
1	25.	The method of Claim 15, further comprising the steps of:
2		mounting the first array of microprobes on an X-Y translating stage
3	configured to	translate in a plane parallel to the first array prior to said directing step.

removing the first array from the X-Y translating stage.

1	26.	The method of Claim 25, further comprising the step of:
2		translating the stage to a first position in which the first microprobe of
3	the first array	of microprobes is disposed in an optical path defined by the beam,
4	wherein said	translating step is performed prior to said directing step;
5		moving, after said selecting step, the stage to a second position in which
6	a second micr	coprobe of the first array of microprobes is disposed in the optical path;
7		reflecting the beam off a microcantilever of the second microprobe;
8		determining a second amount of deflection of the beam indicative of an
9	amount of stat	tic deflection of the microcantilever of the second microprobe;
10		selecting a second microprobe compensation piece based upon the second
11	amount of def	lection; and
12		repeating said moving, directing, reflecting, determining and selecting
13	steps for each	microprobe of the first array of microprobes.
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1	27.	The method of Claim 26, wherein the first and second compensation
2	pieces are wed	lge-shaped.
1	28.	The method of Claim 27, wherein the compensation pieces each have a
2	base and a mo	ounting surface defining a corresponding angle.
1	29.	The method of Claim 28, wherein the corresponding angles of the
2	compensation	pieces are different.
1	30.	The method of Claim 25, wherein the translating stage is motor-driven.
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1	31.	The method of Claim 28, wherein the compensation pieces are made of
2	an insulating r	naterial.

1	32.	A compound microprobe assembly comprising:
2		a microprobe mount;
3		a microprobe coupled to said microprobe mount, the microprobe having
4	an amount of	static stress-induced deflection; and
5		wherein said microprobe mount is configured so as to compensate for the
6	amount of static deflection.	
1	33.	The microprobe assembly of Claim 32, wherein said microprobe mount
2	includes a sur	pport and a compensation piece having a shape corresponding to the
3	amount of static deflection.	
1	34.	The microprobe assembly of Claim 33, wherein the compensation piece
2	is a wedge ge	enerally aligning the microprobe with a deflection detection apparatus.
1	35.	The microprobe assembly of Claim 33, wherein said support and said
2	compensation	piece are integrally formed